

# Changing Concepts of Basic Local Public Health Services

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A FORTUITOUS combination of scientific progress, high-level income, and public enlightenment has given rise to a great upsurge of popular interest in personal and community health. This has resulted in a demand not merely to retain the advances already made, but to achieve further progress in human health. For the more seasoned workers in health fields, long accustomed to public apathy and meager budgetary support, this is a new and rather strange experience. To some extent we have been caught unaware of a trend already in effect, but, as I will show, not as badly as some have been led to believe. Many of the newer concepts of basic public health services are already reflected in the present functions and organization of health departments. Since your main interest—and mine, for that matter—is expressed in the day-to-day health needs of people and the means immediately at hand for satisfying those needs, I will direct my observations and remarks to the local scene—more particularly, to the local health department and its place in the changing order.

Although I may seem to be taking liberties with the title assigned to this address, let me say in justification that any discussion of changes in the ideas of what basic health services are and what they should be must begin with the organization which may accommodate those changes. Professional health workers cannot, it seems to me, talk about advancing concepts and unexplored fields of public health in a vacuum. I

should like, therefore, to begin this discussion with a brief review of the current status of health organizations, including staffs and budgets.

## LOCAL HEALTH ORGANIZATIONS

The nation's greatest and most insistent need in the field of public health is still to strengthen existing local health departments and local health services, and to extend professionally directed public health services to areas now lacking such protection. But when viewed in perspective, the current picture of local health organization and services is not at all disheartening; there is, in fact, cause for considerable satisfaction. At long last it would appear, the public is recognizing that there can be only limited application of existing scientific knowledge concerning the prevention of disease and of new developments in public health until all areas of this country are covered by local public health units properly staffed and financed. What is often overlooked, however—and it is right that it should not be overstressed—is the fact that advances have been and are being made. Actually, the strides made in local health organizations and in the enrichment of the local health program in the last dozen years have been surprising.

There were, for instance, in this country in 1948, 1,266 public health departments, which provided some measure of local health services for 1,668 counties and 281 separate cities (Table 1). Except for vacancies, all these were un-

TABLE 1

*Number of Full-time Health Departments Rendering Local Health Service, Number of Counties Included, and Population Represented, by Class of Health Department Organization, June 30, 1948*

<i>Class of health department organization</i>	<i>Number of full-time health departments *</i>	<i>Number of counties included *</i>	<i>Population represented †</i>
Total health departments rendering local health service ‡	1,266	1,668	106,297,984
Local health departments	1,195	1,312	95,615,715
Single county (including city-county)	(653)	(653)	(38,204,536)
Local health district	(261)	(659)	(12,254,450)
City	(281)	(—)	(45,156,729)
State health districts rendering direct local service ‡	71 **	356	10,682,269

\* Based on the Directory of Full-time Local Health Officers. Suppl. 194 (1948 Revision). *Pub. Health Rep.*

† Local estimate, as of June 30, 1947.

‡ In addition, there are 53 state health districts, including 290 counties having a population of 8,654,224, organized primarily for supervisory and advisory service.

\*\* Ten of these districts cover parts of counties only; therefore, no entry is made for them in the column "Number of counties included."

der the direction of health officers employed on a full-time basis. Thus, organized local health service was rendered to about 106 million people, or roughly three-fourths of the total population of the country. Omitting city health departments, this may be contrasted with the 556 total health departments of similar definition, representing 751 coun-

ties, which offered local health services in 1935 (Table 2). The increase is a significant one—a 77 per cent rise in the number of total health organizations and a 122 per cent jump in the number of counties covered.

The most noteworthy advances have been made in the development of local health districts. A dozen years ago,

TABLE 2

*Progress Between the Years 1935 and 1948 of Full-time Health Departments, Exclusive of City Health Departments,\* Rendering Local Health Service, and Counties Included, by Class of Health Department Organization*

<i>Class of Health Department Organization</i>	<i>Departments</i>				<i>Counties included</i>			
	<i>Number</i>		<i>12 year increase</i>		<i>Number</i>		<i>12 year increase</i>	
	<i>Dec. 31, 1935 †</i>	<i>June 30, 1948 ‡</i>	<i>Number</i>	<i>Per cent</i>	<i>Dec. 31, 1935 †</i>	<i>June 30, 1948 ‡</i>	<i>Number</i>	<i>Per cent</i>
Total health departments rendering local health service **	556	985	429	77.2	751	1,668	917	122.1
Local health departments	527	914	387	73.4	610	1,312	702	115.1
Single county (including city-county)	(486)	(653)	(167)	34.4	(486)	(653)	(167)	34.4
Local health district	(41)	(261)	(220)	536.6	(124)	(659)	(535)	431.4
State health districts rendering direct local service **	29	71 †	42	144.8	141	356	215	152.5

\* 1935 information not available for city health departments. There were 281 city units operating as of June 30, 1948.

† Mountin, Joseph W., Hankla, Emily K., and Druzina, Georgie B.: Ten Years of Federal Grants-in-Aid for Public Health, 1936-1946. *Pub. Health Bull.* No. 300.

‡ Based on the Directory of Full-time Local Health Officers. Suppl. 194 (1948 Revision). *Pub. Health Rep.*

\*\* In addition, there were the following numbers of state health districts organized primarily for supervisory and advisory service: December 31, 1935—5 districts, including 11 counties; June 30, 1948—53 districts, including 290 counties.

† Ten of these districts cover parts of counties only; therefore, no entry is made for them under "Counties included, June 30, 1948."

when the concept of local health districts was just gaining broad recognition, the bulk of local health organizations consisted of single county or city units. There were less than 50 health districts in 1935; in 1948, there were 261 such health districts, covering 659 counties, which represented an increase of 537 per cent in number of organizations and 431 per cent in counties included (Table 2). The present trend toward local health district organizations is an encouraging one; it shows that, despite obstacles that were once considered insurmountable, contiguous communities can, by combining their staff and consolidating funds and facilities, offer their citizens at least some measure of modern health protection.

While great strides have been made in the development of local health units, the problem of staffing is still a serious one. Less than 5 per cent of the nation's total population is at present covered by local health organizations which fully meet the minimum staffing standard

recommended by public health authorities as necessary to provide basic public health services (Table 3). On the other hand, over 40 million people, representing about 29 per cent of the total population, are served by local health units which meet the minimum standard with respect to public health physicians, and, according to these standards, over 77 million people—about 56 per cent of the population—reside in local areas having the prescribed number of sanitarians (Table 3).

The health officer vacancies highlight the general shortage of personnel and make the situation relatively more acute. In 1948, 23 per cent of the local health organizations were either without health officers or were temporarily served by the health officers of neighboring jurisdictions (Table 4). These organizations represented 35 per cent of the counties and 8 per cent of the cities classed as full-time organizations.

Against the inadequacies and vacancies just cited, must be balanced not only the

TABLE 3

*Proportion of Total Population of the United States Having a Full-time Health Officer and Sufficient Personnel of Designated Classes \* Employed Full Time by Official Health Agencies or by other Official Agencies Rendering Some Type of Health Service †*  
*Total Population of the U. S.—139,217,263 ‡*

<i>Class personnel</i>	<i>Population having a full-time health officer and sufficient personnel of each class to meet minimum standard</i>	<i>Per cent of total population of the U. S. having a full-time health officer and sufficient personnel of each class to meet minimum standard</i>
All classes of designated personnel	6,521,553	4.7
Physicians	40,239,914	28.9
Nurses	17,508,287	12.6
Sanitation personnel	77,468,072	55.6
Clerks	55,670,827	40.0

\* Minimum standard for personnel of four designated classes as agreed upon by the American Public Health Association, Committee on Administrative Practice, Subcommittee on Local Health Units:

- 1 public health physician for every 50,000 persons (or for every local health jurisdiction of fewer than 50,000),
- 1 public health nurse for every 5,000 persons,
- 1 sanitary engineer or sanitarian for every 25,000 persons,
- 1 clerk for every 15,000 persons.

† From *Report of Public Health Personnel, Facilities, and Services* submitted by full-time local health jurisdictions of 47 states and by the District of Columbia for the fiscal year ending June 30, 1947. (Vermont has no full-time local health organizations.)

‡ For states completely reported, local estimate of total population is used; for states not completely reported, 1940 Census population for unreported areas is used to complete the state total. Resulting total for the U. S. is less than 1947 Bureau of the Census estimate because many local areas, having no recent local estimate available, used 1940 census population in making reports.

TABLE 4

*Number of Full-time Health Departments Rendering Local Health Service and Counties Included, with Position of Health Officer Vacant, or Temporarily Served by a Neighboring Health Officer, by Class of Health Organization, June 30, 1948 \**

Class of health department organization	Total number of full-time health departments and counties included		Number and per cent of full-time health departments and counties included with health officer vacancies			
	Departments	Counties	Departments		Counties	
			Number	Per cent	Number	Per cent
Total health departments rendering local health service †	1,266	1,668	295	23.3	578	34.7
Local health departments	1,195	1,312	270	22.6	383	29.2
Single county (including city-county)	(653)	(653)	(173)	(26.5)	(173)	(26.5)
Local health district	(261)	(659)	( 74)	(28.4)	(210)	(31.9)
City	(281)	( - )	( 23)	( 8.2)	( - )	( - )
State health districts rendering direct local service ‡	71 ‡	356	25 **	35.2	195	54.8

\* Based on the Directory of Full-time Local Health Officers. Suppl. 194 (1948 Revision). *Pub. Health Rep.*

† In addition, there are 53 state health districts, including 290 counties, organized primarily for supervisory and advisory service. Of these, 13 districts—including 108 counties—had health officer vacancies.

‡ Ten of these districts cover parts of counties only; therefore, no entry is made for them in the "Counties" column.

\*\* Three of these districts cover parts of counties only; therefore, no entry is made for them in the "Counties" column.

increasing numbers of the four basic categories of health personnel—physicians, nurses, sanitarians, and clerks—in the last dozen years, but also the

TABLE 5

*Personnel Employed Full Time by Full-time County Health Departments, Including City-County Organizations, and by Local Health Districts for the years 1935 and 1947 \**

Class of personnel	Number of Personnel employed	
	1935 †	1947 ‡
Total	3,435	11,349
Physicians	601	808
Nurses	1,339	4,055
Sanitation personnel	593	2,267
Clerks	621	2,573
All others	281	1,646

\* Independent city health departments excluded; also state health districts, except in Delaware and New Mexico where these districts are often considered as local. Data not available for 1935 for these types of organizations.

† Mountin, Joseph W., Hankla, Emily K., and Druzina, Georgie B. Ten Years of Federal Grants-in-Aid for Public Health, 1936-1946. *Pub. Health Bull.* No. 300.

‡ From Report of Public Health Personnel, Facilities, and Services submitted by local health jurisdictions of 47 states for the fiscal year ending June 30, 1947. (Vermont has no full-time local health organizations.)

growing variety of personnel generally employed in local health organizations. From 1935 to 1947, for example, there was a threefold increase in the number of full-time nurses and nearly a fourfold increase in the number of sanitarians employed in county health departments and local health district organizations (Table 5). The pattern in local health department staffs may also be described as one of steady expansion for such newer health workers as dentists, laboratory workers, health educators, and nutritionists. Growth in such professional personnel is reflected in the "All Others" group shown in Table 5.

#### FUNDS

Funds for local health purposes have steadily increased during the last few years. While the true increases in state and local appropriations for such purposes cannot be precisely determined because of the incompleteness of financial data and inconsistencies in reporting such information for the early years, it

TABLE 6

*Expenditures for Local Health Services by State and Local Health Departments as Reported to the Public Health Service, According to Source of Funds, for the Fiscal Years 1937, 1940, and 1948 \**

Source of Funds	Amount			Per cent		
	1937 †	1940 †	1948 ‡	1937	1940	1948
All sources	\$11,610,552	\$28,677,528	\$93,142,617	100.0	100.0	100.0
State government	1,581,931	4,339,577	18,936,177	13.6	15.1	20.3
Local government	6,088,486	15,782,090	59,292,305	52.4	55.1	63.7
Federal grants-in-aid allocated by P.H.S.	2,808,227	6,547,823	10,538,533	24.2	22.8	11.3
Other sources **	1,131,908	2,008,038	4,375,602	9.8	7.0	4.7

\* Exclusive of operating costs of hospitals and sanatoria. The complete picture of expenditures for local health services cannot be determined precisely. In some instances, especially in earlier years, reports upon which the totals were based failed to include jurisdictions or activities unless expenditures involved funds allocated to the states by the Public Health Service.

† Mountin, Joseph W., Hankla, Emily K., and Druzina, Georgie B. Ten Years of Federal Grants-in-Aid for Public Health, 1936-1946. *Pub. Health Bull.* No. 300.

‡ Information on file in the Division of State Grants, Public Health Service. Excludes liquidation of previous years' encumbrances and construction.

\*\* For the most part, "Other" funds are those allocated by the Children's Bureau under terms of title V of the Social Security Act. Money donated by foundations is included if expended by the health department.

is known there has been substantial growth in the amount of funds expended for local health work. As reported to the Public Health Service by the states, expenditures of funds from state sources for local health services rose from 1½ million dollars in 1937 to almost 19 million dollars in 1948. Available information on local governmental appropriations, likewise, indicates a substantial increase for the same period (Table 6). These figures, impressive in themselves, are exclusive of many services provided by the state health department directly to the people, such as those represented by state-operated venereal disease facilities, mobile tuberculosis clinics, and aid toward the operating costs of hospitals and sanatoria.

I have cited these few figures to show that, despite the gaps and frequent inadequacies, definite progress has been made, both in the establishment and maintenance of local health organizations and in the expansion of existing services. It is not too much to say that this in itself is an index of change in the status and functions of local health organizations and, through them, of the application of advancing concepts in the scope of local health services.

#### LOCAL HEALTH SERVICES

Turning to the content of local health programs, it can be seen that these programs embody a rather broad concept of health department responsibility for health services. Local, as well as state health agencies, are gradually assuming responsibility for a wide range of health services. In addition to the traditional health department activities of sanitation, communicable disease control, health education, and the like, various new clinical and medical corrective services are now being made available on the local scene (Table 7). The fact that in 1947 there were 2,328 diagnostic and treatment clinics for venereal disease, 4,237 medical well child centers, 453 diagnostic and treatment clinics for cancer, and 628 mental hygiene clinics operated by health departments or by other official or voluntary agencies, attests to the growing attention to personal health services (Table 7).

Base data on earlier health programs are not available for local health departments, but a comparison of current state projects with those conducted a little over a decade ago may serve in some measure to indicate the relative increase in scope of local health activities. This

TABLE 7

*Number of Public Health Clinics of Specified Types Operated by Health Departments and by Other Official or Voluntary Agencies Rendering Some Type of Health Service in Local Areas Having a Full-time Health Officer \**

<i>Type of Clinic</i>	<i>Total Number of Clinics</i>	<i>Number of Clinics Operated by Health Departments</i>	<i>Number of Clinics Operated by Other Official or Voluntary Agencies</i>
Tuberculosis diagnostic †	1,325	879	446
Venereal disease ‡	2,328	1,962	366
Medical maternity †	2,182	1,536	646
Medical well child †	4,237	3,548	689
Collapse therapy for non-sanatorium patients	831	350	481
Pediatric †	988	376	612
Tumor diagnostic and treatment	453	62	391
Tumor diagnostic only	238	45	193
Mental hygiene	628	129	499
Polyclinic service	679	200	479

\* From Report of Public Health Personnel, Facilities, and Services submitted by full-time local health jurisdictions of 47 states and by the District of Columbia for the fiscal year ending June 30, 1947. (Vermont has no full-time local health organizations.)

† Held at least monthly.

‡ Held at least weekly.

is so because state health department activities tend to be complementary in one way or another to local programs. Practically all the examples of growth in Table 8 are known to have their local counterparts.

Besides the numerous auxiliary services—diagnostic and educative—offered by voluntary agencies to localities, many services provided by state health departments may be considered local in character. This includes provision of drugs and biologicals, operation and support of various clinical facilities, the preparation and dissemination of health education materials, and laboratory diagnostic aids. When all the services are combined—local health organizations, voluntary agencies, and supplementary state facilities—it can be seen that the health services available to a great many localities cover a wide range. This should not, of course, blind professional health workers to the need for the expansion and extension of services in the areas where they are weak or completely lacking. But it does testify to the fact that the concept of local health services has advanced considerably beyond what was considered reasonable or adequate a decade ago.

#### CHANGING PUBLIC HEALTH NEEDS

I have briefly indicated the scope of local health services currently made available, services which in some respects reflect the changes in recognition of public health problems. It is worth while to examine these problems in greater detail, since the health programs of the future will undoubtedly be increasingly fashioned around the needs and conditions which are revealed as significant by mortality, morbidity, and population data. The outstanding factors which will determine the direction of public health activities for the next decades are, by now, well known—the general aging of the population and the increase in chronic diseases. As a result of effective control of the infectious diseases and a general decline in the birth rate, there has been a marked shift in the population from youth to the older ages (Table 9). For example, it is estimated that by 1950, 7.6 years will have been added to the median age for the entire population since 1900. Less than one-fifth of the population was 45 years or older in 1900; conservative estimates indicate that by 1960 almost one-third of the population will be 45 years of age or over. The proportion of persons 65 years and older,

TABLE 8

*Number of States \* Reporting a Specified Activity as an Identified Project Initiated Within or Prior to Designated Years*

Activity	States Initiating Projects Within or Prior to Specified Year	
	1935 †	1948 ‡
Communicable disease control	39	46
Tuberculosis control	19	46
Venereal disease control	23	46
Malaria and mosquito control	20	36
Sanitation	45	46
Industrial hygiene	4	46 **
Laboratory services	44	46
Public health nursing	30	46
Maternity and/or child health services	36	46
Public health education	16	45
Dental services	18	43
Cancer services	5	46 **
Mental hygiene	1	43 §
Nutrition	7	42
Hospital survey and planning	..	45 ††
Personnel administration	14	45
Personnel training	18	44
Local health administration	31	46
Vital statistics	45	45 ¶

\* Initiation dates of "identified projects" not reported by one state. One other state reported initiation dates only for "Cancer control" and "Mental hygiene."

† Mountin, Joseph W., Hankla, Emily K., and Druzina, Georgie B. Ten Years of Federal Grants-in-Aid for Public Health, 1936-1946. *Pub. Health Bull.* No. 300. Data from this source apply only to projects conducted by the health department.

‡ As reported by state health departments in the *Annual Combined Report and Plan* for the fiscal year 1949.

\*\* Includes two states in which activities are the function of a state agency other than the health department.

§ Includes 17 states in which administration of activities is the responsibility of a state agency other than the health department.

†† Includes 9 states in which administration of activities is the responsibility of a state agency other than the health department.

¶ Activity not a function of the health department in one state.

the group showing the most striking changes, has almost doubled since 1900, and the best indications are that over 9 per cent will be in what is usually designated as the old-age bracket by 1960.

The changes in gross mortality figures and in the leading causes of death since 1900 are equally significant. The dis-

eases which threatened during infancy, childhood, and the most productive periods of life have, to a considerable extent, been conquered. The leading causes of death today are those which are most commonly associated with the older ages—the chronic diseases (Table 10). Such diseases as diphtheria have

TABLE 9

*Distribution of the Population by Age Groups in 1900 and 1940, and Estimated Distribution in 1950, 1960, and 1975 \**

Age Group	Percentage Distribution for Specified Years				
	1900	1940	1950	1960	1975
Under 5 years	12.1	8.0	8.3	7.0	6.8
5-14 years	22.4	17.0	17.4	16.0	14.5
15-24 years	19.6	18.2	15.2	16.3	14.1
25-44 years	28.1	30.1	30.3	29.0	29.0
45-64 years	13.7	19.9	21.1	22.6	24.7
65 years and over	4.1	6.8	7.7	9.1	10.9
Median ages in years	22.9	29.0	30.5	32.7	34.1

\* Data for 1900 from U. S. Bureau of the Census: Population, Second Series, U. S. Summary, 1940. Data for other years from U. S. Bureau of the Census: Forecasts of the Population of the U. S., 1945-1975, 1947.

disappeared from the ten leading causes of death. At present, only one of the ten—premature birth—is associated with early life; on the other hand, such chronic illnesses as diseases of the heart, cancer, and diabetes account for an increasing part of total mortality of today. In even greater measure the morbidity picture is being altered by these same disease trends.

The implications of an older population and an increase in diseases which are characteristic of middle and later life are plain for the health officer. He must now adapt to greatly altered problems the machinery and techniques developed for earlier public health programs. A clear concept of the public health aspects of the chronic and degenerative diseases must not only be developed in health departments but also must be transmitted to medical, welfare, and other groups which have an interest in or an operating responsibility for these matters. The control of chronic disease, the extension of the period of active life, and the provision of adequate public health protection for the aging segment of the population, largely neglected up to now in our thinking, represent the current opportunities and the challenges to health officers and health organizations.

#### THE LOCAL HEALTH DEPARTMENT'S ROLE

While health departments have embarked on some of the newer programs that are relatively well defined, they have tended to be slow in entering others where patterns are not so clear-cut or where a lack of social policy furnishes a basis for conflict. In most of the new areas of public health responsibility there is much scientific and administrative pioneering to be done. Broadly speaking, the health department's range of activity involves investigation, prevention, case finding and education, the provision of diagnostic auxiliary aids to the clinician, and the administration of various public services and facilities having to do with care or rehabilitation. As illustrations of the place of the health department in the new public health programs, we may take the patterns now being formulated in connection with mental health and diabetes.

Mental hygiene has had several alternating periods of enthusiasm and apathy but now appears on the way to developing a pattern of public health responsibility for the mitigation and prevention of mental illness. From the standpoint of federal participation, the mental health program is relatively new, having received legislative recognition only since

TABLE 10

#### *Ten Leading Causes of Death for the Years 1900, 1930, and 1946\**

1900	1930	1946
1. Pneumonia (all forms) and influenza	1. Diseases of the heart	1. Diseases of the heart
2. Tuberculosis (all forms)	2. Pneumonia (all forms) and influenza	2. Cancer and other malignant tumors
3. Diarrhea, enteritis, and ulceration of the intestines	3. Cancer and other malignant tumors	3. Intracranial lesions of vascular origin
4. Diseases of the heart	4. Nephritis	4. Nephritis
5. Senility, ill-defined, and unknown	5. Intracranial lesions of vascular origin	5. Accidents, excluding motor-vehicle accidents
6. Intracranial lesions of vascular origin	6. Tuberculosis (all forms)	6. Pneumonia (all forms) and influenza
7. Nephritis	7. Accidents, excluding motor-vehicle accidents	7. Tuberculosis (all forms)
8. All accidents	8. Premature births	8. Premature births
9. Cancer and other malignant tumors	9. Senility, ill-defined, and unknown	9. Diabetes mellitus
10. Diphtheria	10. Motor-vehicle accidents	10. Motor-vehicle accidents

\* National Office of Vital Statistics, Public Health Service: United States Summary of Vital Statistics, 1946. *Special Reports*, Vol. 28, No. 1 (Sept. 13), 1948.



1946. The local program has still not taken on any final form, but is being developed along broad preventive and educational lines. Central facilities are being established in communities to handle some of the problem cases and to serve as auxiliary clinics to the mental hospital, but, more especially, to initiate and guide a community program designed to impart a broad understanding of the principles of mental hygiene. These clinics are the agencies through which common personality and emotional difficulties are explored. They serve as the focal points for anticipating and adjusting conflicts which may arise in normal parent-child, teacher-pupil, and employer-employee relationships. Case finding programs, aimed at highlighting the individuals with specific emotional difficulties, depend upon mental health education of the community at large and the dissemination of information about mental health principles and practices. Efforts to incorporate mental hygiene principles in normal, everyday relationships in the home, the school, the industrial plant, and in the welfare and social agencies mean that increased training in mental health—through such methods as orientation or refresher courses and consultative services—must be made available to public health personnel, physicians, welfare and social workers, teachers, and others in public service.

In terms of numbers affected, diabetes is an important chronic disease and offers an excellent opportunity for a sound public health program. According to latest estimates, there may be as many as two million diabetics in the country, nearly half of whom are unaware that they have the disease; diabetes morbidity may be expected to increase even more in the future because it is a disease of middle age and older life in an era of an aging population. Since early discovery of diabetes is the most important single factor in its control, the initial phases of a community control pro-

gram are usually built around case finding. Early discovery of diabetes is possible through urine and blood examinations, for which screening techniques amenable to mass application have now been developed. An educational campaign on the control of the disease can go hand in hand with the case finding program. Investigation of epidemiological facts associated with the occurrence of the disease and follow-up activities, through home visits by nurses to assist the attending physicians in obtaining regular and routine checkups, are also included in the local control program.

Classes for diabetics have proved a beneficial and valuable part of a local diabetes control program. By means of group instruction, individuals with diabetes are taught how to prepare their diets, how to examine urine, how to inject and use insulin, and how to adjust to their conditions so as to live normal, active lives. Because the classes can accommodate relatively large groups of people, they are economical and practical; moreover, they are a valuable aid to the physician in helping him to control the course of the disease and prevent complications.

#### HEALTH SERVICE AREA

In discussing the organization of local health departments, I mentioned the increasing trend toward health service districts. This has been one answer to the problem of what the health service area is and what it should consist of. Local health departments rendering various kinds of public health services have sprung up in chaotic fashion throughout the United States. These units serve many types of geographical areas—towns, cities, single counties, and, in the case of district health units, combinations of two or more such areas. The public health workers who pioneered the development of local health units were primarily interested—and rightly so—in the establishment of machinery to pro-

vide at least minimal health protection for the people wherever it was possible to do so. Although methods of districting and systematic planning were advocated, the pattern which has evolved is characterized essentially by opportunism.

The stimulus to an orderly construction of hospitals and health centers provided by the Federal Hospital Survey and Construction Act of 1946 introduced a new factor which may well be considered in the planning of public health service areas. This Act opened the way for the erection of physical facilities which seemed destined to become closely related to the work of health departments, especially in rural areas. Professional public health workers should now consider the development of local health units in a nation-wide pattern integrated with the planning for hospitals and health center buildings. Up to the present, there has been little coordination of hospital and health department programs, with the hospital placing emphasis on the treatment of acutely ill persons while the health department has confined its activities to programs dealing primarily with the prevention of disease. With the line of demarcation between prevention and cure rapidly disappearing, the local health department must assume a new role in protecting the health of the community. Any system which makes hospitals and health departments mutually exclusive is uneconomical and certain to become outmoded.

In carrying out a broadened public health program, the health officer and his professional staff need the cooperation of the medical profession and the full utilization of the general hospital facilities of the community. Local as well as district or regional hospitals should become the nuclei of medical service areas. The integration of public health activities in these patterns of medical service areas would be a big step for-

ward in providing better and fuller health services. Such a pattern would mean that hospital and health center facilities, as well as expensive diagnostic equipment needed by both hospitals and health units, would be more efficiently used. Specialized staff members of hospitals and health departments could become available to both agencies on a cooperative basis; the result would be improvement of community health programs in such fields as tuberculosis, venereal disease, cardiovascular diseases, diabetes, mental hygiene, and cancer control. In addition, cooperative planning would bring the benefit of single service areas for hospitalization and local health services; thus, the movement of population to secure medical and hospitalization services and public health services would flow in one direction rather than in many directions as is frequently true at the present time.

#### NEW OPPORTUNITIES IN FAMILIAR FIELDS

Current emphasis for changes in program content seems to be placed on personal health services, especially with regard to the chronic diseases. This is quite appropriate. At the same time, it is well to examine some of the more traditional areas of health department activity for additional opportunities. I refer specifically to environmental control in a broader sense than heretofore used.

Of the ten leading causes of death to which I referred earlier, the one which takes its heaviest toll of the younger age groups is accidents. Accidents also rank high in the list of causes of death, disability, loss of productivity, and economic drain among adults. Paradoxically, however, accident prevention has received the least amount of attention by health officers. Until quite recently—and even now, in some quarters—prevention of accidental deaths and injuries was considered outside the realm of

public health. Any modern concept of public health, however, must include accident prevention, particularly home accidents, as a logical job for public health agencies. The fact that home accidents alone cause well over 30,000 deaths and result in the injury of about 5 million people a year, indicates that an area of profound significance for national health and well-being has been virtually ignored by public health agencies. Research on the causation of accidents must be undertaken intensively, epidemiological patterns must be established, the emotional and psychological factors in accidents must be investigated, and wide-scale educational and preventive campaigns must be begun.

The insect and rodent control problem is still a serious one in many parts of the country and diseases to which these pests give rise represent a continuing menace. Full advantage should be taken of the newer methods for controlling flies, mosquitoes, fleas, rats, and other vermin which are reservoirs or vectors of disease and which interfere with human comfort and welfare. Without continuous and community-wide control programs by local health departments, residents are likely to be inadequately protected from potentially grave health hazards.

Several diseases which can be communicated to man from animal reservoirs—such as rabies, brucellosis, and salmonellosis—should be of serious concern to health authorities. The number of reported cases of rabies, for instance, has increased alarmingly in the last several years. While many communities have very effective rabies control programs, others are still relatively weak. With the proper use of diagnostic facilities for rabies, an adequate immunization program, and an active educational campaign to promote public cooperation in the vaccination and registration of animal pets, most communities can carry on adequate rabies control programs.

Concerted community and state, as well as national, efforts can bring about the ultimate eradication of rabies in the United States.

Similarly, brucellosis is a challenge to public health leaders. It demands epidemiological investigation as well as the adoption of certain measures to prevent its spread. Since this disease is most serious among farmers and other workers in animal industries, health departments serving areas in which such pursuits are followed intensively should consider the control of brucellosis one of their important responsibilities.

The control of the pollution of the country's water resources by domestic sewage and industrial waste was designated as a public health problem in the Water Pollution Control Act of 1948. This Act marked the recognition that concerted action by the federal government, interstate agencies, state water pollution control agencies, and localities is necessary to clean up the polluted interstate waters which are a danger to human health and welfare. Although this is largely a state and interstate program, ultimate success depends in great measure on the part played by local health departments.

The recent "smog" disaster in a small city in Pennsylvania dramatically pointed up one aspect of the necessity for adequate atmospheric pollution control measures. Atmospheric pollution, of course, is of serious public health concern to communities exposed to the fumes, smoke, and dust from industrial establishments. It has even broader public health significance, however, as the carrier of substances and elements injurious to health, comfort, and livability. Enteric diseases have been brought to a low level of incidence by sanitation procedures directed toward substances that enter the body by way of the gastrointestinal tract. The air, however, now remains the great avenue for the entrance of infectious and toxic

substances. A program of pollen control, for example, might contribute considerably to the mitigation of asthma, hay fever, and various allergies which are sources of chronic ailments and which interfere with economic productivity and with individual health and comfort. One of the great challenges to public health, now and in future years, will be to accomplish with air control results comparable to those attained through such measures as water purification, milk pasteurization, and food preservation. Considerable research and investigation is still necessary to determine the precise effects of various atmospheric contaminants on human health and to establish effective control measures. Local health departments, however, should be aware of the problem and take advantage of any opportunities to investigate their own needs in this respect and to assist in coöperative en-

deavors to eliminate the danger and the nuisance of atmospheric pollution.

It is the local health department to which citizens must look for the establishment and broadening of such health services, vital to the community's welfare, as I have just indicated. The health department contains the biological and, to a certain extent, the social competence which, together with its legal authority and administrative experience, enables it to launch and continue comprehensive programs of community health. Instead of becoming overly engrossed in the minutiae of a restricted field, the health department might well broaden its interest and make its staff, resources, and facilities available for administering a wide variety of public programs. By so doing, its stature and usefulness in the community would be immeasurably enhanced to the ultimate public benefit and profit.

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